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# Mining for Gold: Developing and Implementing a Strategic Sourcing Prioritization Model for the United States Air Force

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Keller, Rick; Parson, Carl; Rankin, Michael; Keeney, Justin

Monterey, California. Naval Postgraduate School

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**Mining for Gold:  
Developing and Implementing a  
Strategic Sourcing Prioritization Model  
for the United States Air Force**

Karen A.F. Landale, Maj, USAF, PhD  
Acquisition Research Symposium  
4 May 2016



# An AFICA-NPS Collaboration

## AFICA

Cameron Holt, Brig Gen, USAF  
Roger Westermeyer, Col (Ret) USAF  
John Sharkey, Maj, USAF  
Michael Rankin, MSgt, USAF  
Justin Keeney, SSgt, USAF  
Mr. Rick Keller, USAF  
Mr. Carl Parson, USAF

## NPS

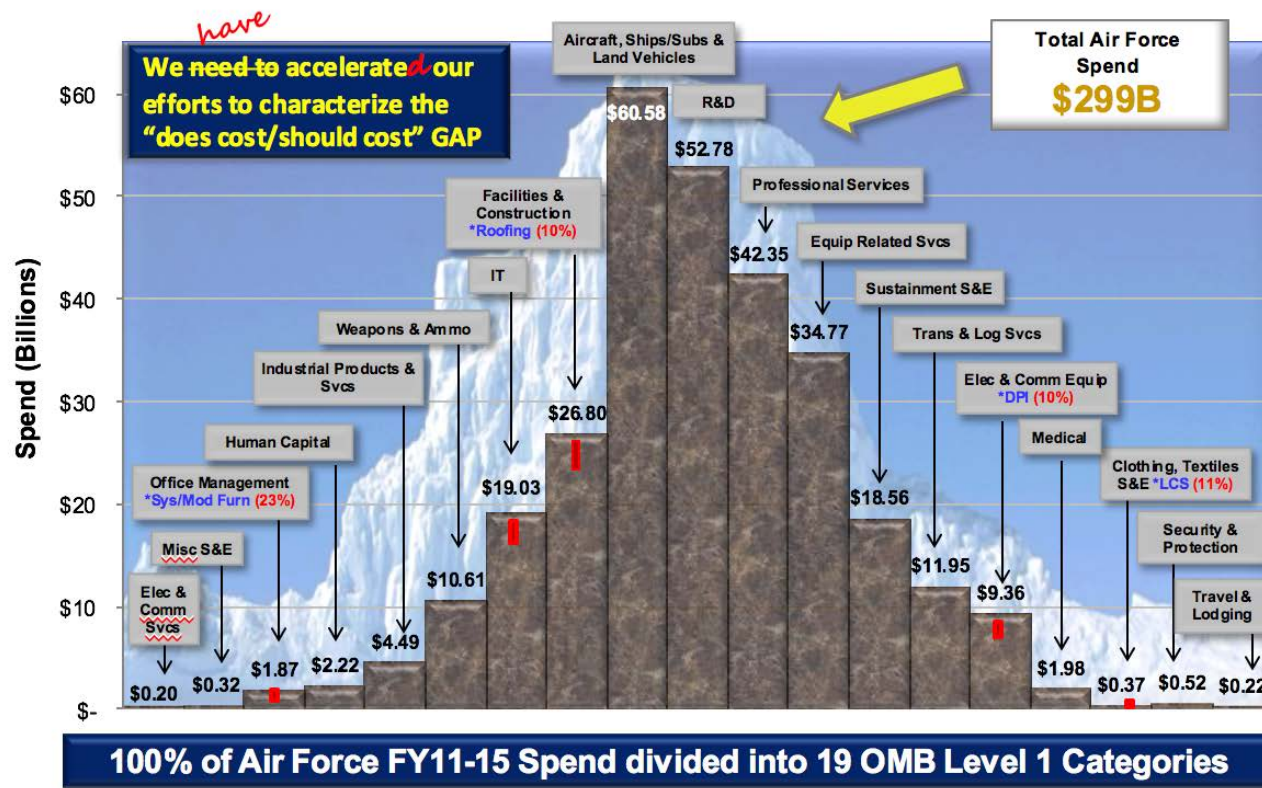
Rebecca Ban, Capt, USAF  
Brett Barnes, Capt, USAF  
Matthew Comer, Capt, USAF  
Jamie Davis, Capt USAF  
John Ellis, Capt, USAF  
Mark George, Capt, USAF  
Jacques Lamoureux, Capt, USAF  
Marcus Miller, Capt, USAF  
Michael Murrow, Capt, USAF  
Clinton Walls, Capt, USAF



- Private Sector – 1990s
  - Strategic approach to managing costs & suppliers
  - Enterprise-view: SCM, processes, demand
- Public Sector – 2000s
  - Increase value through purchasing
  - Leverage buying power of the enterprise
  - Air Force *Installation* Contracting Agency (AFICA)



## Air Force (FY11-15) A Mountain of Spend



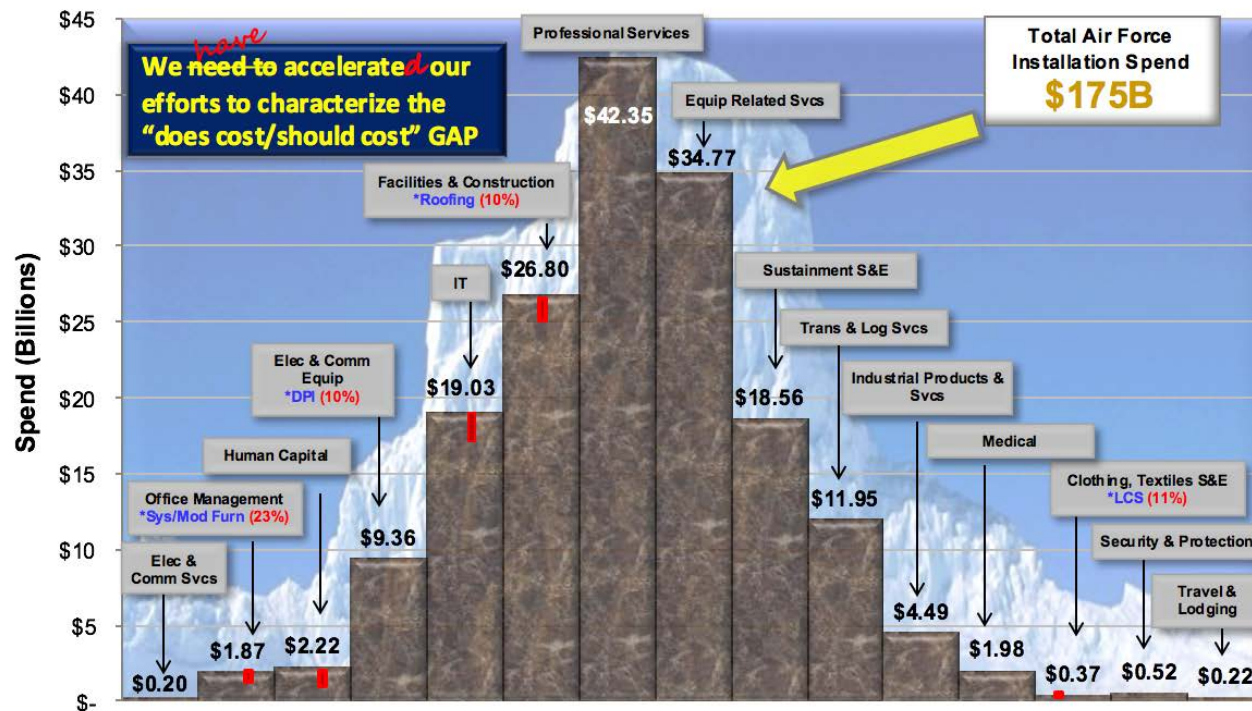
Slide from BICC (2015), "AFICA Mining Company Strategic Plan"



# Air Force "Installation" Spend



## Air Force "Installation" Support (FY11-15) A Mountain of Spend



**\$175B of the AF's \$299B FY11-15 Total Spend divided into 15 OMB Level 1 Categories**

12

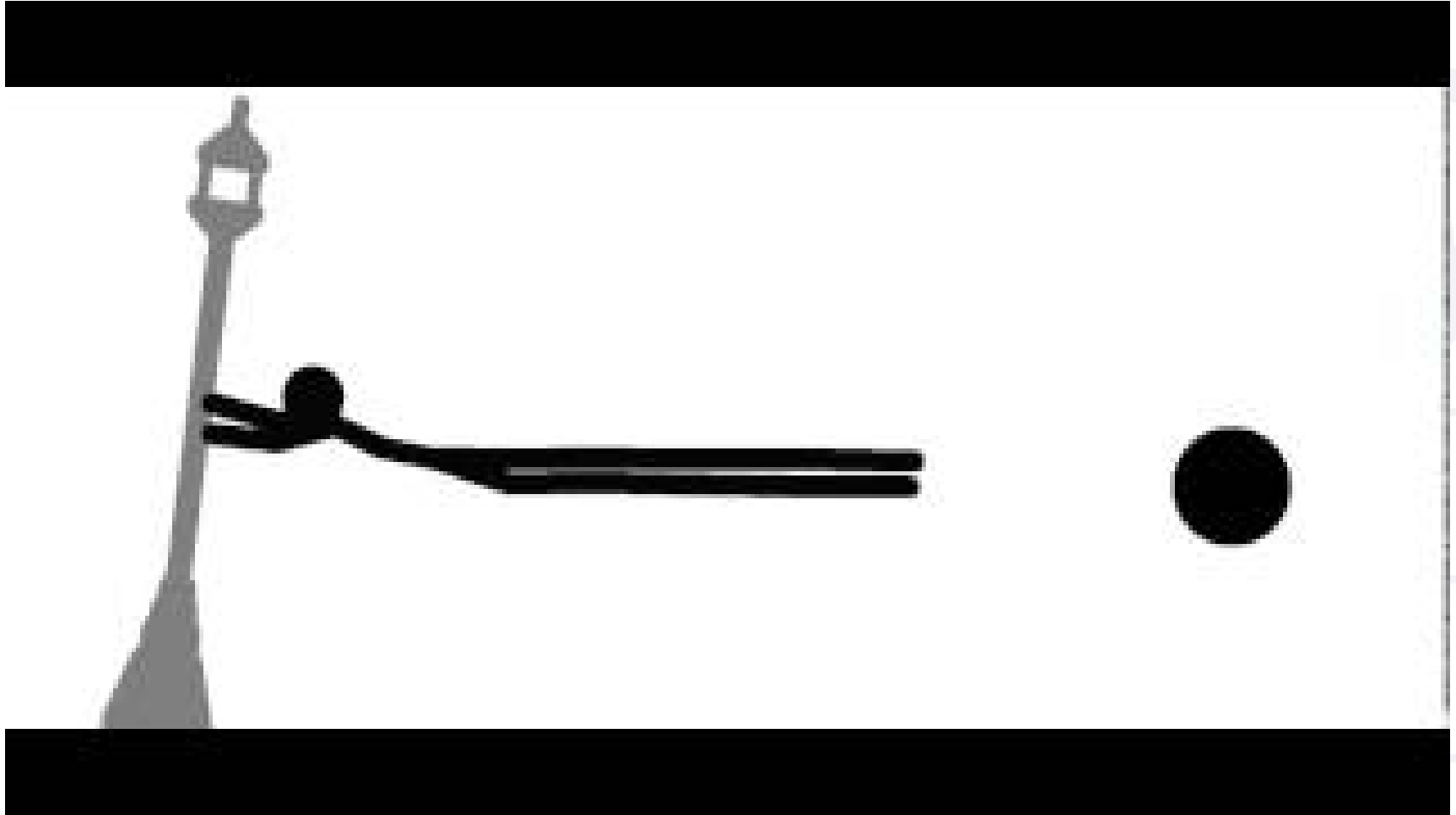
Slide from BICC (2015), "AFICA Mining Company Strategic Plan"



- Determine which products/services present the best opportunities for strategic sourcing
  - Proactive approach
  - Data-driven
  - Repeatable
  - Uses *internal AF & external market data*
  - PSC-/FSC-level and Category-level
- It's about ROI!



# Doing a Spend Analysis is Hard

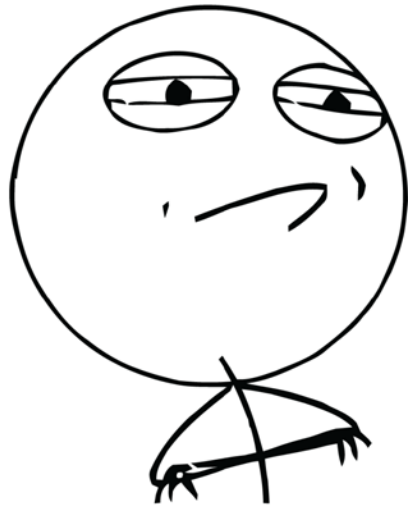






# Doing a Spend Analysis is Hard

## CHALLENGE ACCEPTED





# Doing a Spend Analysis is Critical

“Although such an analysis can be time-consuming and labor-intensive, private enterprises have found that without a spend analysis it is **difficult to identify prospective targets** for applying better [purchasing and supply management] practices, develop **supply strategies** for specific commodities, select the **best suppliers**, manage suppliers in a way to **maximize rewards and minimize risks**, and convince all senior leadership of the need to **shift to best [purchasing and supply management] practices** and of the need for **resources** for the shift” (RAND, 2004, p. 7).

- ~~Simple~~ *Elegant*
- Internal data only
- Uses installation-level\* data from FPDS-NG (2010-2014)
- Performed at PSC-/FSC-level
- Weights based on SME judgment

$$\begin{aligned} \text{PSC/FSC Score} = & .20(\#Contracts) + .20(\#Suppliers) + \\ & .20(\#PurchOffices) + .15(\#Offers) + \\ & .12(\$Obligated) + .08(Trend) + \\ & .05(\#MAJCOM) \end{aligned}$$

\*Kinda



- Chose to work with Top 67 PSCs/FSCs  
Why? 80% of total spend
- Rack/Stack\*
  - Top 67 PSCs/FSCs by **Algorithm Score**
  - Top 67 PSCs/FSCs by **Variable**
  - Color Coded

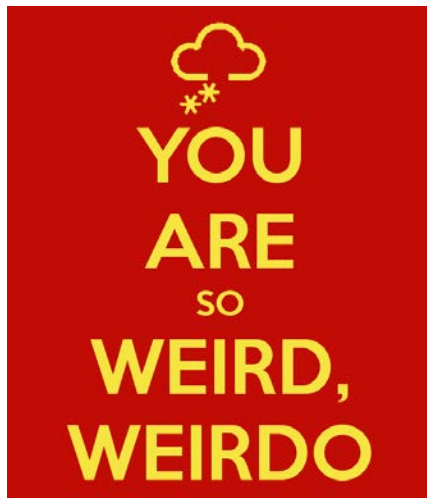
**116 Unique Installation  
PSCs/FSCs**



\*Some Assembly Required.  
Trend & MAJCOM Not Included.

- 116 Installation PSCs/FSCs sorted by:

	Algorithm Score	Overall Spend Score	Top 67 # Variables	# PSCs/FSCs
<b>Winners</b>	Top 67	--	3+	45
<b>Weirdos (All Others)</b>	Top 67	--	<= 2	71
	Not Top 67	--	3+	
	Not Top 67	Top 67	--	



**DON'T  
BE LIKE  
THE REST  
OF THEM  
DARLING.**



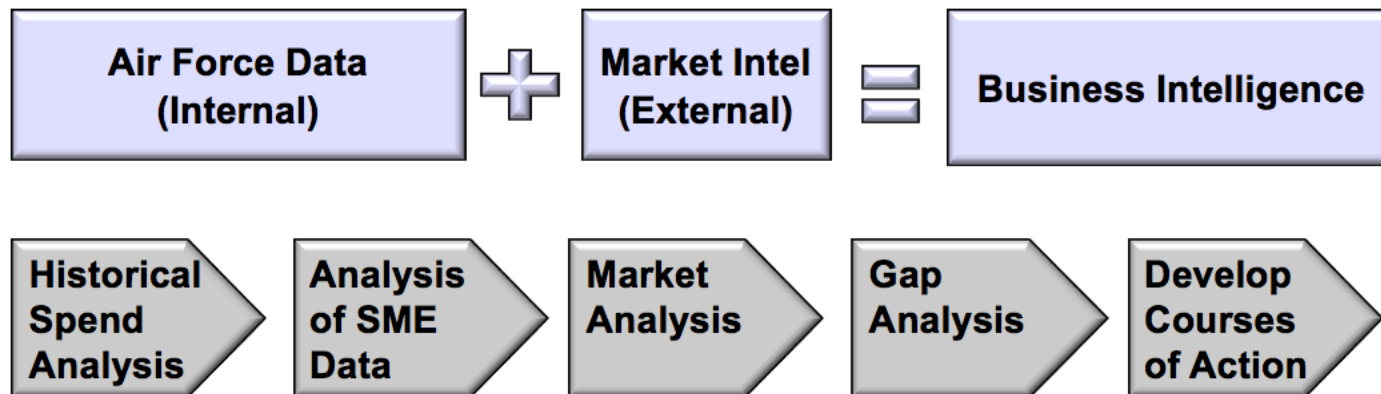


# Results – External Market Data

- A
- E
- S
- T

Factor	Category	Dollar Obligation	Weight	Score
Recent Price	1 Logistics Support Services	\$5,572,885,855	25%	3
Forecast Price	2 IT Hardware	\$6,869,933,636	25%	3
Forecast Price	3 Business administration services	\$1,230,101,727	25%	3
Weighted Score	4 IT Security	\$594,464,283	25%	3.0
	5 IT Software	\$1,776,425,182		
	6 IT Outsourcing	\$8,057,772,530		
	7 Lodging	\$56,977,615		
Market Structure	8 Medical Equipment and Accessories and Supplies	\$176,523,865		
Factor	9 Public Relations and Professional Communications Services	\$969,616,073	Weight	Score
Availability of Growth	10 Industrial Products Install / Maintenance / Repair	\$534,060,909	25%	1
Low	11 Office Management Products	\$1,591,701,290	25%	1
Market share concentration	12 Test & Measurement Supplies	\$524,692,762	25%	5
Low	13 Management Advisory Services	\$20,559,852,901	25%	5
Product Specialization	14 Technical and Engineering Services (non-IT)	\$16,919,021,645	25%	3
Medium	15 Furniture	\$454,106,706	25%	3
Switching Costs	16 Specialized educational services	\$1,112,202,148	25%	5
Low	17 Hardware & Tools	\$156,280,747	25%	5
Weighted Score	18 Fire/Rescue/Safety/Environmental Protection Equipment	\$120,148,013	25%	3.1
	19 Security Services	\$66,169,544		
	20 Security Systems	\$195,729,063		
	21 Healthcare Services	\$1,368,663,187		
Market Risk	22 Telecommunications	\$80,850,754		
Factor	23 Machinery & Components	\$851,912,712	Weight	Score
Price Dispersion	24 Facility Related Services	\$18,152,037,809	25%	3
Medium	25 Social Services	\$117,744,990	25%	3
Recent Price	26 Construction Related Materials	\$205,760,179	25%	5
Low	27 Transportation of Things	\$3,745,176,128	25%	5
Vendor Financial Risk	28 Transportation Equipment	\$95,683,009	25%	5
Low	29 Facility Related Materials	\$46,442,575	25%	5
Supply Chain Risk	30 Vocational Training	\$474,637,860	25%	5
Low	31 Construction Related Services	\$2,246,979,919	25%	5
Weighted Score	32 Package Delivery & Packaging	\$29,719,859	25%	4.5
	33 Motor Vehicles	\$39,191,166		

- Resources assigned to investigate the best opportunities
- Category Intelligence Report (CIR)



Object from Sharkey (2015) Slides, "Business Intelligence Competency Cell (BICC) Training Plan"





Business Intelligence Competency Cell (BICC). (2015). *AFICA Mining Company Strategic Plan*. WPAFB, OH.

Handfield, R. (2006). *Supply market intelligence: A managerial handbook for building sourcing strategies*. Boca Raton, FL: Auerbach Publications.

RAND Corporation. (2004). *Using a Spend Analysis to Help Identify Prospective Air Force Purchasing and Supply Management Initiatives*. Santa Monica: RAND Corporation

Sharkey, J. (2015). *Business Intelligence Competency Cell (BICC) Training Plan*. WPAFB, OH.

Westermeyer, R. (nd). *Category Management: Applying Better Buying Power to Installation Support*. WPAFB, OH.